(No Model.) 2 Sheets—Sheet 1.

C. E. CALVERT.

HOUSE DOOR LETTER BOX.

No. 487,210. Patented Nov. 29, 1892.

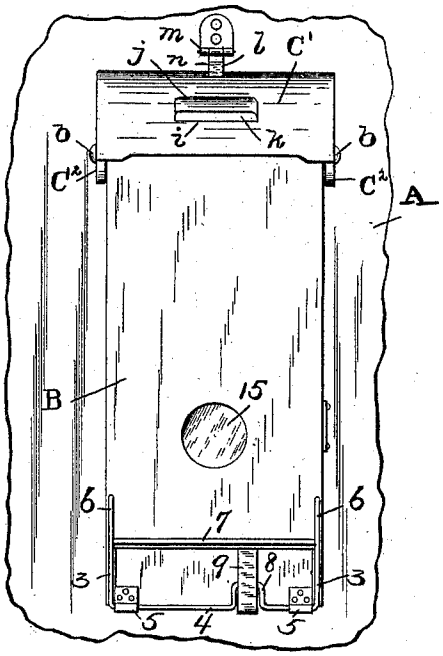


Fig. 1.

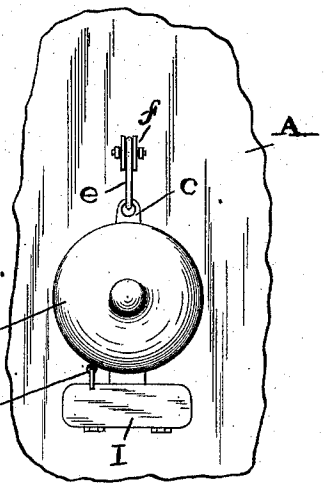
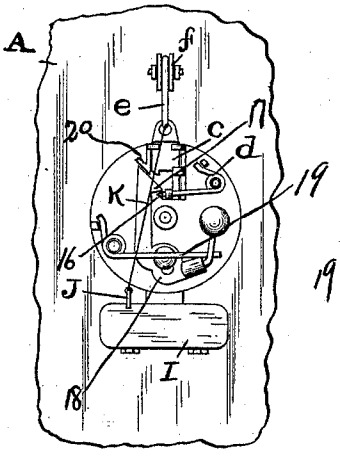


Fig. 2.



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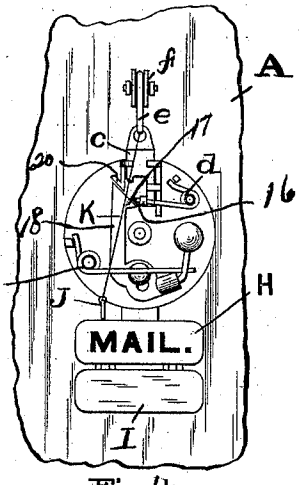

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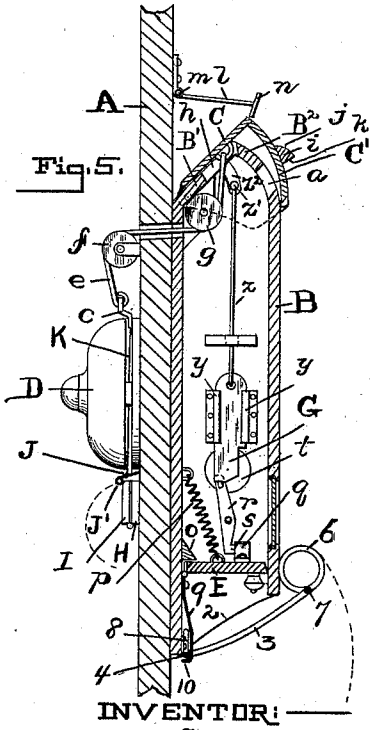

Fig. 5.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 6.

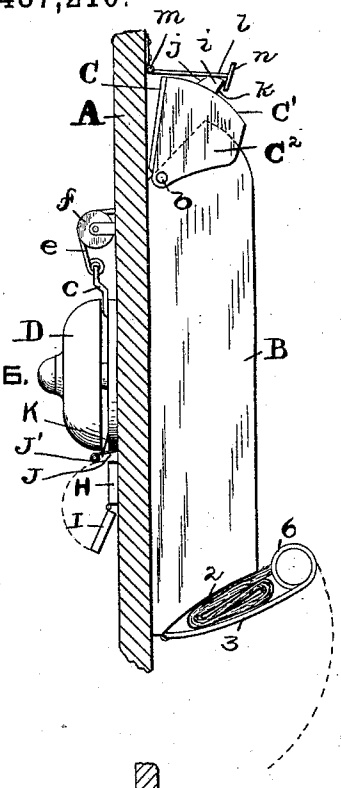


Fig. 7.

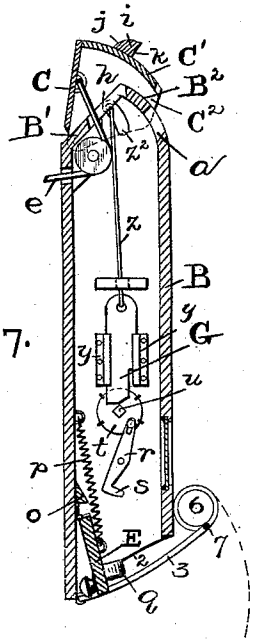


Fig. 8.

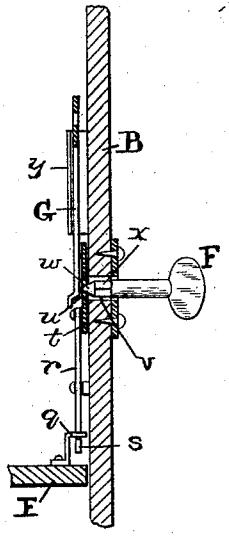
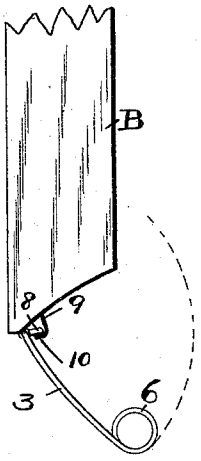


Fig. 9.



WITNESSES:—

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES E. CALVERT, OF PORTSMOUTH, VIRGINIA, ASSIGNOR OF ONE-HALF TO DAVID R. CREECY, JR., OF SAME PLACE.

HOUSE-DOOR LETTER-BOX.

SPECIFICATION forming part of Letters Patent No. 487,210, dated November 29, 1892.

Application filed July 12, 1892. Serial No. 439,741. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. CALVERT, a citizen of the United States, residing at Portsmouth, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in House-Door Letter-Boxes, of which the following is a specification.

This invention relates to an improvement in house-door letter-boxes; and the objects are as follows: to provide for sounding a gong and operating an indicator when the movable lid of the box is manipulated, to provide a safety-lock for the door through which the mail-matter is removed, and to provide an outside holder for newspapers and similar matter.

To this end the invention consists in the novel features of construction and combinations of parts hereinafter described.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 shows an outside view of a portion of a house-door to which my improved apparatus is applied. Fig. 2 shows an inside view; Fig. 3, a similar view with the bell-cup removed. Fig. 4 shows the same parts as they appear when the lid of the letter-box is opened. Fig. 5 shows a vertical section through the whole apparatus with the parts in their normal relations and the casing of the safety-lock removed. Fig. 6 shows a side view with the lid raised and the newspaper-holder performing its function. Fig. 7 shows a vertical section with the lid raised and the door of the box open, the casing of the lock being removed. Fig. 8 shows a vertical section through the safety-lock, and also shows the key with its end in the keyhole. Fig. 9 shows a side view of the newspaper-holder in its downward position.

The letter A designates a house-door or other partition. A box B is secured on the outer side of said door and has a top consisting of a slanting back portion B′, and a rounded front portion B^2, the latter provided with a receiving slot or opening *a*. A pivotal lid has a straight part C, which covers the slanting back portion of said box top, and a curved part C′, which covers the curved portion B^2 of the box-top. Said lid also has sides C^2, which fit on the outer sides of the box sides and are pivoted thereto at a point *b* near the house-door A. The lid may be turned backward on its pivots to uncover the receiving-slot. A gong D is fastened on the inner side of the door and has a slide-piece *c*, whose movement in either direction causes the gong to strike. Said slide-piece is normally held down by a spring *d*, and has a nose 16 at the lower end, which nose is inclined on the upper and lower sides and normally has position under a catch 17 on the clapper-lever 18 of the gong. This lever is held down by a spring 19, and its catch 17 has an inclined upper side, which engages a stationary incline 20. It will now be seen that upon raising the slide-piece *c* its nose 16 acts upon the catch 17, and the latter, sliding on the incline 20, moves out of the path of said nose and allows the spring 19 to return the clapper-lever, and thus sound the gong. The parts now having assumed the relative position shown in Fig. 4, upon the spring *d* pulling the slide-piece *c* down again the inclined under side of the nose 16, acting on the incline of the top side of the catch 17, moves the clapper-lever again until said nose passes the catch, when the lever is returned by the spring 19 and the gong is again sounded. A flexible connection *e* is fastened at one end to the slide-piece *c* and passes upward over a pulley *f*, then through the door A and the back of the box B, and up under a pulley *g* in said box, and through a slot *h* in the back portion of the box top, its end being fastened to the pivoted lid. It will now be seen that upon pushing back the lid to uncover the receiving-slot the slide-piece of the gong will be raised against the spring *d* through the medium of the flexible connections *e*, and the gong thereby sounded.

The word "Mail" is inscribed on a plate H, which is fastened on the inside of the door A, and a flap-cover I is hinged at the lower side to said plate in such a way that it tends to drop down and uncover the sign. Said flap-cover is held up over the said sign by a catch in the form of a spring J, fastened to the plate H and having a rounded end J′ to engage the top edge of the flap-cover and hold it up. This spring-catch is connected

with the slide-piece *c* of the gong by a rod K or by other suitable means, and it will be seen that upon the raising of said slide-piece, caused by the opening of the box-lid, to deposit mail the spring-catch is raised, and the flap-cover falls outward and shows the sign to indicate to the occupants of the house that the mail is in the box.

The lid of the box has a lug *i* on top, and said lug has a rounded back surface *j* and a straight shoulder *k* on the front side. A drop-hook *l* is pivoted at *m* to the door A, and its hooked end is rounded on the outer side. When the lid is opened back, the curved surface of the lug *i* encounters the hook and the latter rides up on it and drops over the shoulder *k*, whereby it holds the lid back. The hook has an upward projecting lip *n* at the front, and by pushing up on the said lip the hook is raised and the lid released. The spring *d* then pulls the slide-piece *c* of the gong down, thereby again sounding the gong, and at the same time draws the lid closed through the flexible connection *e*. Thus with every opening and closing of the lid the gong strikes twice to notify the inmates of the house of the arrival of the mail.

The bottom of the box B is closed by a door E, which is hinged at its rear edge to the back of the box and opens downward. The mail is removed through this door and a deflector-piece *o* prevents mail-matter being caught in the hinge. The door is held up in closed position by a spring *p* and locked in such position by the following described means: The door E has a shoulder *q* at one side edge, and a lever *r* is pivoted at its middle to the side of the box on the inside, and has a hook *s* at one end to take behind the shoulder *q*, and at the opposite end said lever is jointed to a crank-disk *t*, fitted against the side of the box and mounted to turn. Said crank-disk has a square opening *u* through its center, which registers with a keyhole *v* through the box side and is adapted to receive a key F, which has a pointed end *w* and a larger square part *x* back of said pointed end and formed to snugly engage the square hole in the crank-disk *t*. It will be observed that turning the crank-disk in one direction throws the hook *s* into engagement with the shoulder on the door, and thereby locks the latter, whereas turning said disk in the opposite direction throws the hook back to a position where the shoulder may pass it as the door is opened.

To guard against tampering with the lock, a safety-plate G covers the disk *t*, and while it is thus covering the said disk only the point end of a key can be inserted in the hole of said disk, as said key will encounter the safety-plate, and this point end does not fit the hole close enough to turn the disk. The safety-plate is fitted to slide in suitable guides *y*, and a rod *z* connects it with a stud *z'*, which projects from one side of the box-lid through a slot z^2 in the side of the box. It will now be seen that the lid must first be opened to slide the plate G from over the disk *t* before the key can be inserted through said disk to a position where its square part engages the hole in the latter and the disk turned to unlock the door. The opening of the lid sounds the gong and hence an alarm is always given before the lock can be opened. This arrangement insures the box against theft.

The sides and back of the box are extended below the hinged door which closes the bottom, and said sides are beveled from the lower back end to the lower end of the front of the box, the beveled edges being hollowed out, as shown at 2.

I provide a wire frame which comprises two side arms 3, having position directly under the lower edges of the box sides and connected at their inner ends by a bar 4, which extends along the bottom edge of the back of the box and is hinged thereto at 5. The side arms 3 have rounded eyes 6 at their outer ends, which bear against the front of the box, and said arms are connected at this point by a cross-bar 7. The inner connecting-bar 4 has a crank-arm 8 at one part, which arm is adapted to lay flat against the back of the box. A leaf-spring 9 is fastened to the back of the box and bears upon the said crank-arm to hold it against the said box back and the hinged frame up with the rounded ends of the side arms thereof against the front of the box. The said spring has a shoulder 10 at its lower end, against which the crank-arm stops. The spring is of a length to allow the frame to be turned downward on its hinges to a position where it extends on a downward slant.

The hinged frame above described is for newspapers and like matter, which will be pressed down between the rounded ends of the said arms and the box front, and will lodge between said side arms and the hollowed-out edges of the box sides, and be held by the action of the spring 9. To remove such matter, the frame is turned downward to its lowest position, and will be held in such position, as the spring then bears directly against the end of the crank-arm 8. It will be observed that this hinged frame does not interfere with the opening of the door E and removal of the mail from the box, as said frame is open between the side arms and connecting cross-bars and the mail-matter may pass through it without obstruction.

The manipulation required on the part of the carrier in delivering mail is greatly facilitated by my improved arrangement. With one hand he can push back the lid which is automatically caught and held by the drop-hook, as previously explained. With the same hand he deposits the mail through the receiving-slot. He then tips up the hook and releases the lid. While this operation is performed the gong is twice sounded, as heretofore explained, and the sign "Mail" is disclosed. Newspapers and like matter are deposited in the hinged frame.

It will be seen that the whole operation may be performed with one hand.

A glass 15 in the front of the box serves to disclose mail in the box.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a box having a pivoted lid, a gong having a spring-held actuating slide-piece, a flexible connection between said slide-piece and the lid of the box, and an automatic catch to hold said lid open.

2. The combination of a box having a pivoted lid with a lug thereon, a pivoted drop-hook arranged to ride upon said lug and take over the same, a gong having a spring-held actuating slide-piece, and a flexible connection between said slide-piece and the lid of the box.

3. The combination of a box having a movable lid, a gong having an actuating slide-piece which is connected with the lid of the box, a sign, a flap-cover for said sign, a spring-catch for holding said cover over the sign, and suitable connections between the said spring-catch and the slide-piece of the gong.

4. The combination of a box having an outlet-door, a lock for holding said door closed and having a turning piece with a keyhole through it, a movable safety-plate to cover said keyhole, and an alarm device connected with said safety-plate.

5. The combination of a box having an outlet-door, a lock comprising a lever with a hooked end to engage a shoulder on said door, and a turning disk connected with said lever and having a keyhole, a safety-plate to cover said keyhole, and an alarm device connected with said plate.

6. The combination of a box having a movable lid and an outlet-door, an alarm device operated by the said lid, a lock for holding the door closed, and means to release the door, said means connected with the lid of the box.

7. The combination of a box having a pivoted lid and a hinged outlet-door, an alarm device operated by said lid, a lock comprising a lever having an end which engages the hinged door, and a disk connected with said lever and having a keyhole through it, and a sliding safety-plate to cover said keyhole and connected with the pivoted lid, substantially in the manner described.

8. The combination of the box having downward-extended sides with beveled edges, and a spring-actuated hinged frame having side arms under the beveled edges of the box sides and provided with rounded ends which bear against the outside of the box.

9. The combination of the box having downward-extended sides with beveled lower edges, a hinged frame having side arms with rounded ends which bear against the front of the box and also provided with a crank-arm, and a leaf-spring bearing on said crank-arm, in the manner and for the purpose described.

In testimony whereof I affix my signature in the presence of two witnesses.

CHARLES E. CALVERT.

Witnesses:
R. A. AGELASTO,
W. A. FENTRESS.